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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,400	12/16/2003	Louis B. Rosenberg	IMM103A	7623
34300	7590	10/05/2005	EXAMINER	
PATENT DEPARTMENT (51851) KILPATRICK STOCKTON LLP 1001 WEST FOURTH STREET WINSTON-SALEM, NC 27101			DINH, DUC Q	
			ART UNIT	PAPER NUMBER
			2674	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/737,400	<b>Applicant(s)</b> ROSENBERG, LOUIS B.	
	<b>Examiner</b> DUC Q. DINH	<b>Art Unit</b> 2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 12-16 are rejected under the judicially created doctrine of double patenting over claims 12-16 of U. S. Patent No. 6,693,626 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

Claim 12 of the pending application	Claim 12 of patent 6,693,626
An apparatus, comprising:	An apparatus, comprising:
a processor;	a processor;
a keyboard device, in communication with the processor; and	a keyboard device, in communication with said processor; and
	a compliant member coupled to said keyboard and configured to be in contact with a surface;

	and
an actuator, coupled to the keyboard device;	an actuator, coupled to said keyboard
the actuator configured to receive a control signal from the processor responsive to a key entry on the keyboard device and output a force the actuator that effects a haptic feedback	the actuator configured to receive a control signal from the processor responsive to a key entry on said keyboard and output a force said keyboard that effect a haptic feedback;

The different between those two claims is one compliant member coupled to the keyboard and configured to be contact with a surface is added to the claim 12 of the patent. However, dependent claim 16 of the copending application cites “the apparatus as recites in claim 12, further comprising at least one compliant element coupled to the keyboard device and adapted to support the keyboard device on a surface”. Therefore, the combination of claims 12 and 16 of the copending application discloses all the limitations of claim 12 of patent 6,693,626.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “housing includes a first portion coupled to the second portion” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

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should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Information Disclosure Statement***

4. The information disclosure statement filed 03/26/04 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.
  
5. The information disclosure statement filed 03/26/04 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 7- 8, 11 and 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Goodwin et al. (U.S Patent No 6,218,966 B1), hereinafter Goodwin.

In reference to claim 1, Goodwin discloses an apparatus in Fig. 1 comprising:

a housing (keyboard housing 10);

a keyboard device disposed in the housing; (keyboard having keys 22, 42 disposed on the housing 10);

an actuator coupled to the housing (transducer actuator 26 of key 22 coupled to the housing 10);

the actuator configured to receive a control signal responsive to a key entry (22) on the keyboard device (10) and output a force to the housing that effect a tactile feedback, i.e., haptic feedback; (col. 3, lines 34-43).

In reference to claim 7, Goodwin discloses the actuator comprise on of the pneumatic actuator, solenoid actuator... (col. 4, lines 33-38 and Figs. 3-5).

In reference to claim 8, Goodwin discloses a processor (CPU 14, Fig. 1-2) in communication with the keyboard device (10) and the actuator (26), the processor operable to receive an input on line 20, responsive to the key entry (22) on the keyboard device (10) and output the control signal on line 18 to the actuator 32 (col. 4, lines 1-18).

In reference to claim 11, refer to the rejection as applied to claim 8. In addition, Goodwin discloses the processor operable to generate control signal based on a command related to the key entry on the keyboard device and output control signal to the actuator (col. 4, lines 8-11; col. 8, lines 35-42).

In reference to claim 12, refer to the rejection to claim 1 and claim 8.

In reference to claim 13, Goodwin discloses the processor is included in a host computer (col. 3, lines 33-39).

In reference to claim 14, refer to the rejection as applied to claim 11.

In reference to claim 15, refer to the rejection as applied to claim 7.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodwin in view of Saarmaa et al. (U.S Patent No. 6189,206),, hereinafter, Saarmaa.

In reference to claims 2-3, Fig. 2 of Goodwin shows the force of the actuator transducer 26 illustrated by the arrow 27 which is substantially perpendicular to a surface on which the housing 10 rests. However, Goodwin does not disclose the haptic feedback includes an inertial force and wherein the inertial force is output by moving an inertial mass. Saarmaa discloses an inertial force to provide tactile feedback illustrated by star to a surface on which the housings rests shown in Fig. 6A by moving an inertial mass 3 in Fig. 3.

It would have been obvious for one of ordinary skill in the art at the time of the invention to substitute the inertial force generate by the actuator transducer with the inertial force generated by moving the mass in the device of Goodwin because it would provide an inertial unit of simple construction but readily adapted to device housings of diverse size and shape as taught by Saarmaa (col. 1, lines 65-67 of Saarmaa).

In reference to claim 4, Saarmaa discloses the actuator is coupled to the housing by a flexure and moves as mass (Fig. 3, col. 5, lines 15-20).

10. Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodwin in view of Brenner et al. (U.S Patent No 6,206,593), hereinafter Brenner.

In reference to claim 5 and 16, Goodwin does not disclose the device further comprising at least one compliant element coupled to the housing and adapted to support the housing on the surface. Brenner discloses a number of rubber feet 162 and 164 are attached to the bottom surface 106 of the housing 110 and a bottom surface of the keyboard 112, respectively, at two or more corners (col. 6, lines 26-28).

It would have been obvious for one of ordinary skill in the art at the time of the invention to provide the he rubber feet 162 and 164 in the keyboard housing 10 of Goodwin because it would support the housing 110 and the keyboard 112 and to hold them in place on smooth surfaces (col. 6, lines 29-32).

11. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodwin in view of Serpa (U.S Patent No 6,587,091).

In reference to claims 9-10, Goodwin does not disclose the host computer further operates to output and auxiliary control signal to the actuator that is related from an auxiliary



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input device, the actuator outputting an auxiliary haptic feedback to the housing. Serpa discloses a force feedback mechanism designed for use with a mouse, trackball, keyboard, touch pad (see abstract) or other interface device manipulated by a user in which the computer operated to output an auxiliary control signal to the actuator that is related with an input from an input device (col. 1, lines 7-12; col. 2, lines 41-45 of Serpa) and the actuator output haptic feedback to the housing as shown in Fig. 5-6 (col. 5, lines 52-56; col. 6, lines 6-14 of Serpa).

It would have been obvious for one of ordinary skill in the art at the time of the invention to provide the output control signal related with an input device to the actuator in the system of Goodwin in view of the teaching of Serpa because it would provide a combination with virtually any sort of computer interface device (such as mouse, a keyboard, a touch pad, or a track ball) and is in simple in design, cost-effective to manufacture, and reliable in operation (col. 2, lines 33-38 of Serpa).

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goodwin in view of Shallot (US 2002/0024501 A1).

In reference to claim 6, Goodwin does not disclose the housing includes housing includes a first portion coupled to a second portion, the haptic feedback causing the first portion to move with respect to the second portion.

Shallot discloses an input device 10 (Fig. 2) having a housing includes a first portion (20) coupled to a second portion (18), the haptic feedback causing the first portion (20) to move with respect to the second portion (18) as claimed [0037].

It would have been obvious for one of ordinary skill in the art at the time of the invention to modifying the keyboard housing of Goodwin to include first portion coupled to a second

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portion so that the haptic feedback causing the first portion to move with respect to the second portion as taught by Shallot because it would provide plurality of different feedbacks indicating different user inputs command to the computer system [0037].

### **Conclusion**


13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUC Q DINH whose telephone number is (571) 272-7686. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edouard Patrick can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DUC Q DINH  
Examiner  
Art Unit 2674

DQD  
September 30, 2005



**PATRICK N. EDOUARD**  
**SUPERVISORY PATENT EXAMINER**

14.